

CLAIMS

1. An improved apparatus for cleaning articles in a fluid and oscillating medium, which comprises:

a frame;

- 5 a container having a central axis perpendicular to an article inlet opening in the container and mounted to the frame so that the central axis of the container is non-perpendicular to a horizontal cross-section of the frame by means of a plurality of opposing parallel compression and tension springs having differing spring rates for enhanced oscillation of the container which holds the articles;

a means for injecting a cleaning fluid into the container for cleaning the articles in the container;

a means for oscillating the container within the frame;

a means for draining excess debris and cleaning fluid from the articles in the container once oscillation begins; and

a means for filtering and recirculating the cleaning fluid from the solid debris back into the container, the filter means comprising a series of filters.

2. The oscillation means of claim 1 wherein at least one electric motor is attached to the container.

- 20 3. The apparatus of claim 1 wherein the frame comprises a plurality of integrally connected unitary components of square tubing for facilitating stability of the container, oscillating means, and drainage means.

4. The apparatus of claim 1 wherein the container is mounted to the frame by a plurality of opposing parallel compression and tension springs for oscillation of the container.

5. The apparatus of claim 1 wherein the injection means comprises:

an intake manifold; and

5 a plurality of injection nozzles horizontally displaced on the intake manifold and over the container for injection of a cleaning fluid into the container to clean the articles contained therein.

6. The apparatus of claim 1 wherein the drainage means comprises:

an opening in the container;

10 a reservoir below the opening and containing a plurality of ports;

a plurality of nozzles connected to the reservoir and ports and in alignment with the filter means.

7. The apparatus of claim 1 wherein the filter means comprises:

a duct leading from the draining means to a first filter; and

15 a duct leading from the first filter to a second filter wherein the second filter contains a circulation pump assembly to circulate the cleaning fluid back into the container through the injection nozzle means.

8. An improved method for cleaning articles comprising:

placing articles in a container with an abrasive media and cleaning fluid;

20 engaging at least one electric motor for oscillation;

pumping the cleaning fluid through a filter system;

injecting the cleaning fluid into the container;

recirculating the cleaning fluid through a series of filter back into the container through and injection means.